NASA LANCE-FIRMS MODIS Active Fire KML

1. What is KML?

KML, or Keyhole Markup Language, is an XML-based language for managing the display of 3D geospatial data. KML was developed for use with Google Earth and is now accepted as an international standard of the Open Geospatial Consortium.

2. How do I view the KML in Google Earth?

Once you have installed Google Earth on your computer, you can view the KML in Google Earth.

1. First, download the KML from the LANCE-FIRMS Active Fire KML download page to a location on your computer.
2. Then, double-click the file. This will launch Google Earth and open the hotspots/fire points in the Temporary Places location.

Alternatively, open Google Earth, go to File… then navigate to the location of the KML on your computer and open the file.

3. Things to be aware of when viewing MODIS active fire data in Google Earth

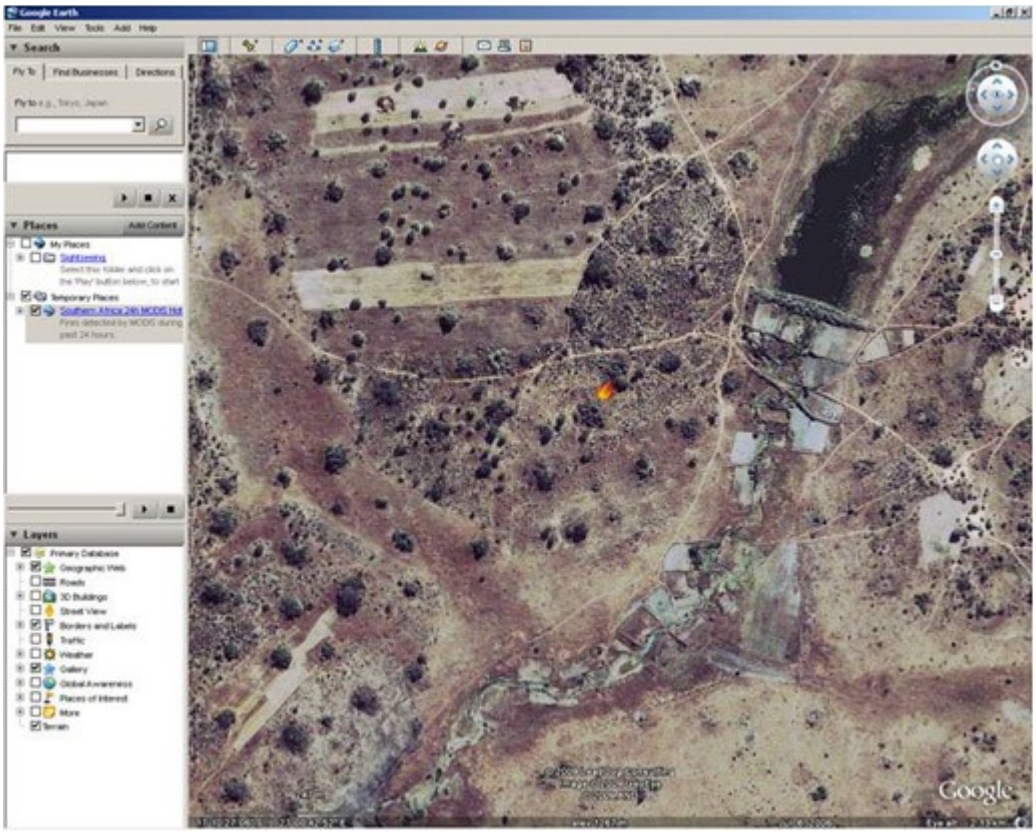
When viewing FIRMS hotspot/fire data in Google Earth you need to bear in mind that the FIRMS data will remain at 1km (approx.) resolution whereas the spatial resolution of the imagery in Google Earth will change as you zoom in. This is important to remember as when

zoomed in the actual location of a hotspot/fire will not exactly where the fire icon is but rather anywhere within an approximate 1km pixel centering on the icon.

4. The KML in Google Earth shows a fire in a park nearby, but I did not see that fire, is it a real fire?

This may be because you are viewing the 1km (approx.) hotspot / fire data on imagery that has much higher spatial resolution (at least 30m), such as the imagery provided in Google Earth. As explained in the FAQ: "What does a MODIS fire detection mean on the ground?" (https://earthdata.nasa.gov/faq#ed-firms-hotspots) the coordinates of a fire/hotspot are given as the center of an approximate 1km pixel. In actual fact, one or more hotspots/fires can occur anywhere within the 1km (approx.) pixel. When viewing higher resolution imagery it is easy to 'see' the fire location as being inside a boundary, or on one side of the road – but it is important to remember the location you see when zoomed into the imagery is the center of the 1km fire pixel and the fire could have actually occurred anywhere within that 1km pixel.

In the following image, the zoom is centered on the fire hotspot icon in the middle of the window. The actual fire could be anywhere in an area of 1km x 1km centered on that icon. The size of the fire is also variable depending on many factors.



5. What is the KML 48h animation?

The Active fire 48 hour animation is a KML time series that shows the locations of hotspot/active fire detections over the last 48 hours. The time series can be viewed using the Google Earth time slider. Click on the clock icon to turn the animation on or off.

As mentioned above, the animation / time series should be used with caution, taking into mind the caveats and issues with the temporal and spatial resolution of the MODIS fire pixel locations.

6. Why can't I see all the fire points in Google Maps?

If you are using Google Maps to view a LANCE - FIRMS KML file, you may not be able to view all of the fire points. This is due to the size and complexity restrictions Google imposes on KML rendering within Google Maps. For more information see:
http://code.google.com/apis/kml/documentation/mapsSupport.html

7. Citation and Disclaimer

NASA promotes the full and open sharing of all data with the research and applications communities, private industry, academia, and the general public. Read the NASA Data and Information Policy.

If you provide the LANCE / FIRMS data to a third party, we request you follow the guidelines in the citation and replicate or provide a link to the disclaimer.

Citation

Please note that data distributed from FIRMS comes from 2 sources: 1) near real-time data (MCD14DL) and 2) data extracted from standard data files (MCD14ML). If you are using the data in a scientific publication, you should be very clear which source you use. We recommend you read the MODIS Fire User Guide version 2.5 to ensure you are using the most appropriate source of MODIS active fire data for your application.

For more information about FIRMS and MODIS, visit the FIRMS FAQ.

For general acknowledgement of FIRMS data and imagery:

> *We acknowledge the use of FIRMS data and imagery from the Land, Atmosphere Near real-time Capability for EOS (LANCE) system operated by the NASA/GSFC/Earth Science Data and Information System (ESDIS) with funding provided by NASA/HQ.*

For Near Real-Time data only:
NASA FIRMS NRT MODIS Near real-time Hotspot / Active Fire Detections MCD14DL data set. Available on-line [https://earthdata.nasa.gov/firms].

For standard data (MCD14ML) extracted from the FIRMS Download Tool:
MODIS Active Fire Detections extracted from MCD14ML distributed by NASA FIRMS. Available on-line [https://earthdata.nasa.gov/active-fire-data].

In the unwise event you use a mixture of near real-time and standard data, you will need to cite both MCD14DL and MCD14ML (extracted by FIRMS).

Disclaimer

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